

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 77-37

WASTEWATER RECLAMATION REQUIREMENTS FOR:

MARIN MUNICIPAL WATER DISTRICT

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. Marin Municipal Water District, hereinafter referred to as the discharger, submitted a report of waste discharge dated March 10, 1977.
2. The discharger proposes to divert treated municipal wastewater for use on residential landscape irrigation for limited commercial purposes and other special situations within the Marin Municipal Water District service area boundary. Because of the current drought, use of domestic water supply for landscape irrigation and certain commercial operations has been curtailed. The proposed use of reclaimed wastewater for landscape irrigation will include surface irrigation of trees, bushes, flowers, shrub areas, and possible turf areas, but not vegetable gardens. This program will remain in effect only until domestic water supplies are determined to be sufficient to reinstitute normal use.
3. Treated wastewater will be made available from treatment plants providing at least secondary treatment to the Water District by existing or future agreements with the participating districts. The Water District will be responsible for any additional treatment and water quality necessary to meet the discharge requirements for the intended use. The Water District will be responsible for coordination of the reclamation program, including approval of users and use areas, and monitoring of wastewater application and use.
4. All wastewater will be picked up by tank truck and applied by means of surface irrigation on all areas for landscape irrigation. All use for this purpose will take place from the truck. No wastewater will be injected into a fixed irrigation system, and no wastewater will be provided for residential storage in containers or other on-site storage facilities.
5. Section 13523 of the California Water Code provides that a regional board, after consulting with and receiving the recommendations of the State Department of Public Health, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water. The use of reclaimed water for the purposes specified in Paragraph 2 could affect the public health, safety, or welfare, and requirements for those uses are therefore necessary in accordance with the Water Code. The requirements of this Order are in conformance with the statewide reclamation criteria established by the State Department of Health and in conformance with the Policy and Action Plan for Water Reclamation adopted by the State Board in January 1977.

6. The Board adopted a Water Quality Control Plan for the San Francisco Bay Basin in April 1975. The water quality objectives for reclaimed wastewater, as set forth in the Basin Plan specify those limits prescribed in Title 17, Section 8025 through Section 8050, California Administrative Code. These objectives have been superceded by Title 22, Sections 60301 - 60357, California Administrative Code.
7. This wastewater reclamation project meets the criteria for a class 4 exemption pursuant to Section 15104 of the California Administrative Code (State EIR Guidelines).
8. This Regional Board has notified Marin Municipal Water District, and interested agencies and persons of its intent to prescribe water reclamation requirements for the proposed uses.
9. This Board at a public meeting heard and considered all comments pertaining to this reuse.

IT IS HEREBY ORDERED, that the discharger in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Reclaimed Wastewater Use Specifications

1. The treatment, distribution or reuse of reclaimed wastewater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. Sources of reclaimed wastewater shall be limited to those treatment plants which meet the disinfection reliability requirements for landscape irrigation contained in Title 22 of the California Administrative Code or provide alternative reliability features which are approved by the Executive Officer.
3. Reclaimed wastewater shall at all times, prior to loading into trucks, contain a chlorine residual demonstrated to provide effective disinfection as determined by compliance with the coliform requirements of this Order.
4. The reclaimed wastewater shall be at all times an adequately disinfected, oxidized wastewater and shall meet the following quality limits at all times:

Total Suspended Solids	10.0 mg/l, maximum
5-day BOD	30.0 mg/l, maximum
Dissolved Oxygen	1.0 mg/l, minimum
Dissolved Sulfide	0.1 mg/l, maximum
Coliform Organisms	Median MPN shall not exceed 2.2 coliform organisms per 100 milliliters of sample at some point in the treatment process. The median value will be determined from the bacteriological results of the last seven (7) analyses. No sample shall exceed 240 coliform organisms per 100 milliliter.

5. All tank trucks, spray equipment, and storage facilities which may at any time contain waste shall be adequately and clearly identified with warning signs and discharger shall make all necessary provisions, in addition, to inform the public and users that the liquid contained is sewage and is unfit for human consumption.
6. Tank trucks shall be cleaned of septage or other contaminants prior to use for reclaimed wastewater.

B. Reclaimed Wastewater Use Prohibitions

1. No wastewater shall be applied to the use areas during periods of rainfall or when soils are saturated.
2. No reclaimed wastewater used for residential landscape irrigation shall be allowed to escape the specified use areas, either by surface flow or airborne spray.
3. No reclaimed wastewater shall be applied for uses not approved in this Order as listed in Finding No. 2 or on locations other than those approved by Marin Municipal Water District.
4. No reclaimed wastewater shall be injected into any fixed sprinkler system.
5. No reclaimed wastewater shall be provided for storage in containers or other on-site storage facilities for residential use. On-site storage for non-residential uses must be approved by the Executive Officer.
6. No reclaimed wastewater shall be applied to vegetable gardens.

C. Provisions

1. A licensing system and surveillance program shall be maintained by Marin Municipal Water District for the control of trucking operations. Each truck driver issued a license must be instructed as to the use requirements contained herein and the potential health hazards associated with the reuse of wastewater.
2. This Order includes items numbered 1 through 8 of the attached "Standard Provisions for the Use of Reclaimed Water" dated March 15, 1973.
3. No reclaimed wastewater to be applied for the uses specified in this Order shall be dechlorinated.
4. The Board approves additional use locations and users for the categories of use specified in Finding 2 as reasonably authorized by the discharger subject to the limitations of this Order and upon approval of and under conditions imposed by the Marin County Health Officer.
5. The Executive Officer may withdraw authorization for specific uses in the event that the terms and conditions of this Order are violated in such uses.

6. The discharger shall immediately inform the Board of any operational malfunction which has or will cause violation of reclaimed wastewater use specifications (paragraph A of this Order) and cease use until corrective actions have been taken.
7. The discharger is required to submit each month for each treatment plant a report according to the schedule for sampling, measurement, and analysis given in Table I (attached). A list of additional users and use locations approved by the discharger shall be submitted with this report. The report shall contain a summary of surveillance activities conducted by the discharger to monitor the hauling and application of wastewater including what observations were made and corrective actions taken regarding violations. Evidence of compliance with specification A.3 shall be submitted with the first monthly report.
8. No wastewater shall be provided users unless the truck driver presents an authorization issued by the Water District. Said authorization shall include user's name, driver's name, authorized uses and locations, and a summary of use restrictions as specified in this Order. This authorization shall be presented on request to the staff of the Regional Board.
9. The discharger and users shall take all measures necessary to minimize public contact with reclaimed wastewater.
10. The discharger is required to submit a report by the end of each calendar year to include the following:
 - a. Volumes of reclaimed wastewater that has been applied for the purpose of residential landscape irrigation and commercial operations.
 - b. Community acceptance, benefits and costs of the reclamation program.
 - c. Any adverse impacts of the program, including possible hazards to public health.

11. These requirements shall not be effective until such time as the Executive Officer receives in writing approval of these requirements from the State Department of Public Health.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions for the Use of
Reclaimed Wastewater, dated 3/15/73
Table I

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES ^{3/}

SAMPLING STATIONS	E-001 thru E-00'n'	Use Areas							
TYPE OF SAMPLES	G								
Reclaimed Wastewater flow rate (gallons/day)	D 2/								
Coliforms (MPN)	D 2/								
Chlorine Residual (mg/l)	2H or cont. 1/ 2/								
Suspended Solids (mg/l)	W								
Observations at selected use areas		W							

LEGEND

Type of Sample

G = grab sample
O = observation

Frequency of Sampling

2H = every 2 hours
D = daily
W = once each week
2W = every 2 weeks

Station

E-001
thru
E-00'n' = station(s) representative of
treatment plant effluent
being diverted for reclamation

- 1/Samples shall be taken during working hours provided all tank trucks are filled during this period of time
- 2/Samples are required to be taken only on days any reclaimed wastewater is being diverted
- 3/Monitoring data shall be submitted on the attached "Monitoring Summary for Wastewater Reclamation" to both the Marin County Health Officer and the Regional Board.

DISCHARGER: MARIN MUNICIPAL WATER DISTRICT

ORDER NO. 77-37

YEAR	FLOW	TOTAL COLIFORM		CHLORINE RESIDUAL	DO	BOD ₅	DISSOLVED SULFIDE	
MONTH								
DAY	TOTAL GALLONS RECLAIMED	MPN/100 ml	MPN/100 ml 7 DAY MEDIAN (2.2 MPN/100 ml)	mg/l DAILY MINIMUM	mg/l (1.0 mg/l min)	mg/l (30 mg/l max)	mg/l (0.1 mg/l max)	
1								
2								
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MIN								
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Memorandum

AGL

To : Mr. Fred Dierker, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson St., Room 6040
Oakland, CA 94607

Date : May 5, 1977

Subject: Residential Irrigation with Reclaimed Water in Marin

CALIFORNIA REGIONAL WATER

From : Sanitary Engineering Section

MAY 3 1977

QUALITY CONTROL BOARD

This is in response to your request of May 2, 1977, for Department of Health concurrence with the Regional Board Order adopted April 19, 1977, regarding the reclaimed water hauling operation for landscape irrigation within the Marin Municipal Water District service area (Order No. 77-37).

On March 4, 1977, the Marin Municipal Water District submitted a proposed program to the Regional Board regarding residential landscape irrigation with reclaimed wastewater. The water district provided copies of their program to the state and county health departments. On March 21, 1977, the Department of Health transmitted information to the Regional Board which we had developed regarding last year's wastewater hauling operation in Marin County and our recommendations on the Marin Municipal Water District proposed program. Specifically, we provided a document entitled "Recommended Requirements for a Program for Residential Irrigation with Reclaimed Wastewater in the Drought Emergency". These recommended requirements were reviewed and approved by the medical staff of the Department.

Unfortunately, neither we nor the Marin County Department of Health Services received the tentative Regional Board order with the usual request for review and comment.

The Board Order which was adopted on April 19, closely parallels our recommended requirements; however, we saw a need to reach an understanding with the water district on several points which were not included in the Order. We have met with representatives of the water district and have agreed on the several matters which are described in the attached correspondence. We have undertaken this to expedite approval of the program.

In light of the understanding which we have reached with the Water District, the Regional Board Order No. 77-37 is satisfactory to us.

With regard to the total reclaimed water hauling program in Marin County, based on the results of last year's operation there is a need for more frequent field surveillance by the regulatory agency at the treatment plants so that any deficiencies will be quickly detected and corrected. We recommend that weekly field inspections be conducted by the Regional Board staff.

William F. Jopling
William F. Jopling
Sanitary Engineering Associate
Sanitary Engineering Section

Attachment

WFJ:amp

cc: Marin Municipal Water Dist.
Marin Co. Dept. of Health Serv.